

AN UPDATED GLACIAL AND PERIGLACIAL INVENTORY OF THE RIO MENDOZA BASIN IN THE CENTRAL ANDES OF ARGENTINA (1:250,000)

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We present an updated glacial and periglacial inventory of the Río Mendoza Basin in the Andes of central Western Argentina based on ASTER and ALOS scenes from 2009, 2010 and 2011. Clean ice and perennial snowfields were identified by an automatic extraction technique whereas debris-covered glaciers and rock glaciers were manually digitized on the screen. We identified 1,611 glacial and periglacial landforms that cover a total area of 570.67 km² distributed between 2,958 m a.s.l. and 6,900 m a.s.l.. The results were validated through several field campaigns performed in different sectors of the basin in the summer of 2012. Different glaciers and rock glaciers were surveyed in order to check their location, current state, and primary classification. The field surveys were complemented with photographs and GPS data. A comparison with a previous inventory of this basin based on aerial photographs from 1963 (Corte and Espizua 1981) shows an important recession of clean-ice glaciers, which is not as evident on debris-covered glaciers and rock glaciers. This new inventory of the Río Mendoza Basin will be part of the National Glacial and Periglacial Inventory of Argentina which is currently under way under the coordination of IANIGLA.

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